

FIG. 1

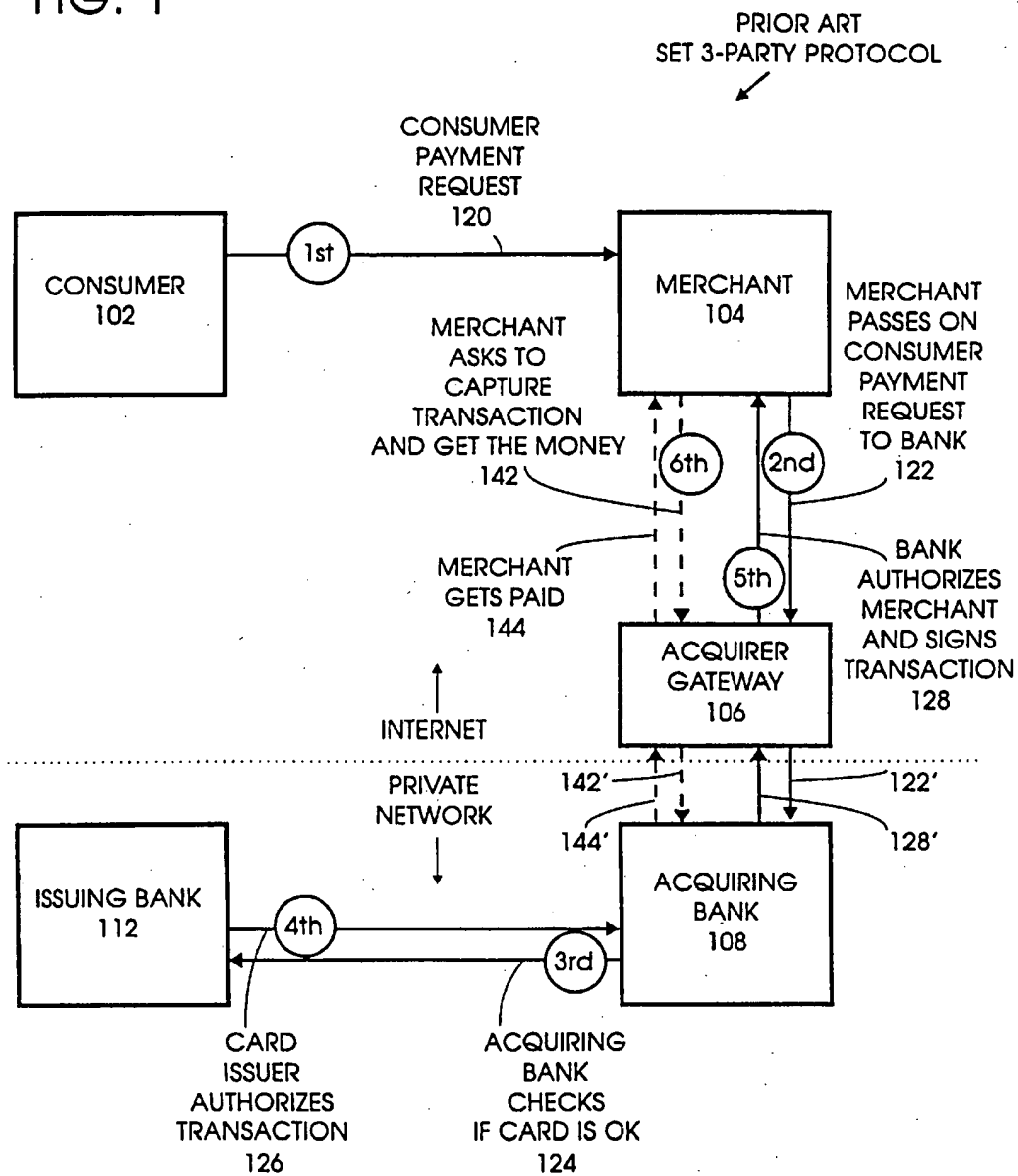


FIG. 2A

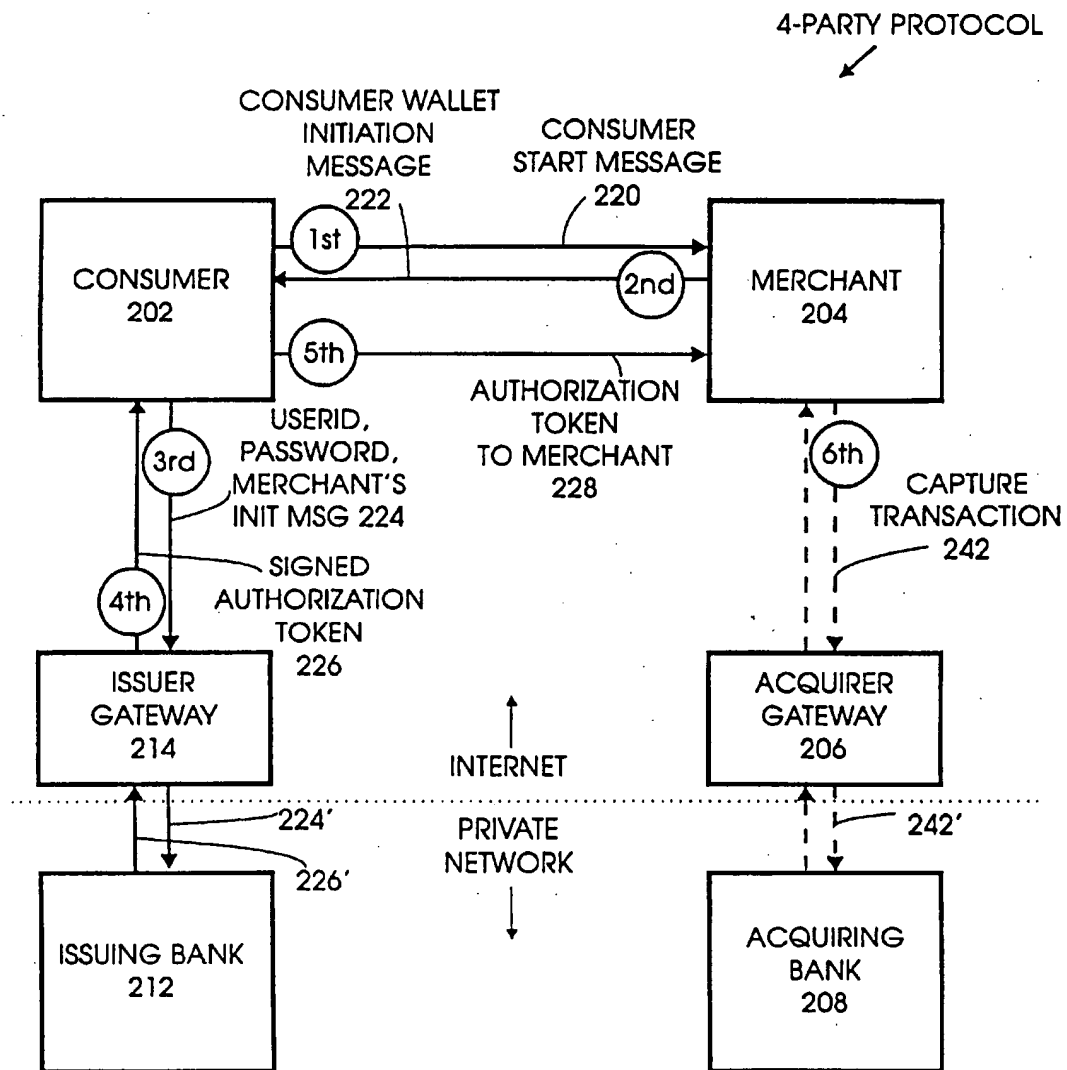


FIG. 2B

4-PARTY PROTOCOL

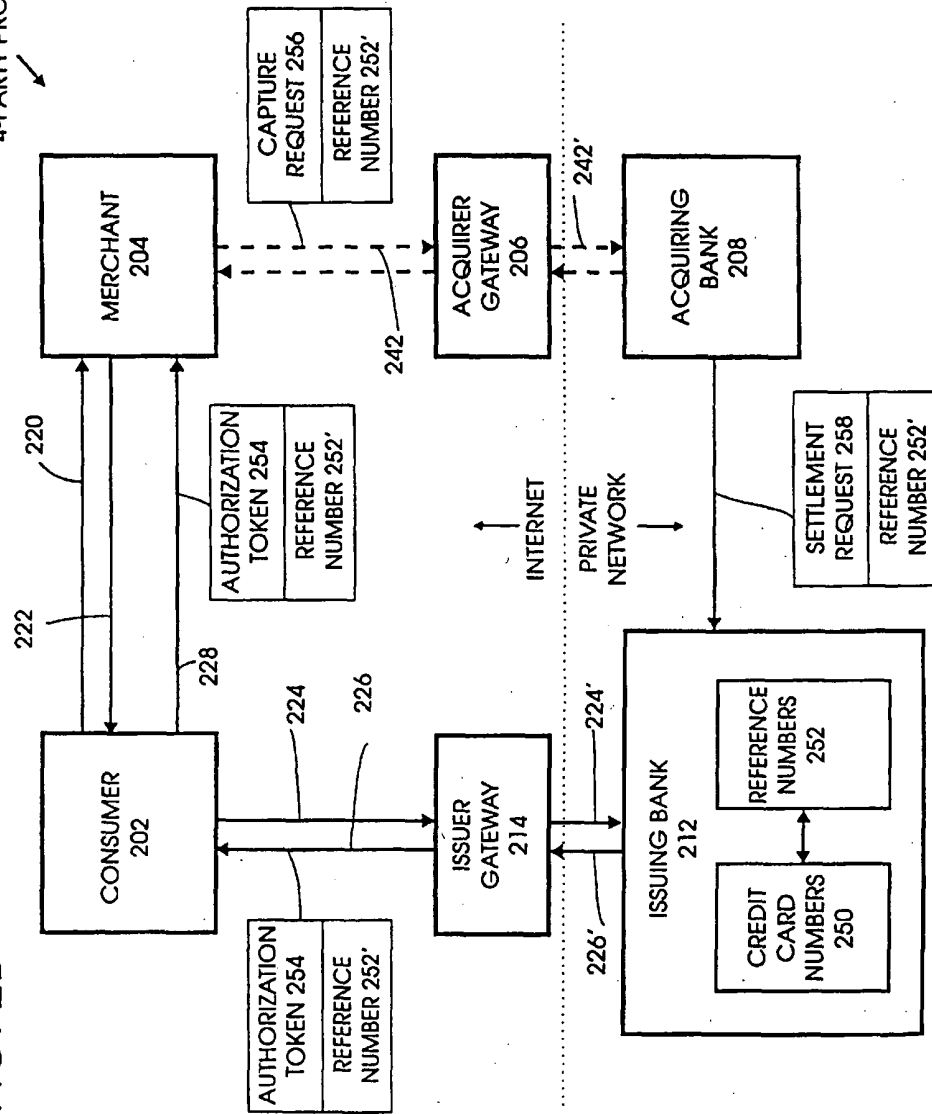


FIG. 2C illustrates a 4-PARTY PROTOCOL involving the following components and message flows:

- Components:**
  - SMART CARD 262
  - SMART CARD READER 260
  - CONSUMER'S COMPUTER 202
  - MERCHANT 204
  - ISSUER GATEWAY 214
  - ACQUIRER GATEWAY 206
  - ISSUING BANK 212
  - ACQUIRING BANK 208
- Message Flows:**
  - 1st:** CONSUMER WALLET INITIATION MESSAGE 222 from CONSUMER'S COMPUTER 202 to MERCHANT 204.
  - 2nd:** CONSUMER START MESSAGE 220 from MERCHANT 204 to CONSUMER'S COMPUTER 202.
  - 3rd:** AUTHORIZATION TOKEN TO MERCHANT 228 from CONSUMER'S COMPUTER 202 to MERCHANT 204.
  - 4th:** CHALLENGE 274 from CONSUMER'S COMPUTER 202 to ISSUER GATEWAY 214.
  - 5th:** CHALLENGE 274' from SMART CARD 262 to SMART CARD READER 260.
  - 6th:** SIGNED CHALLENGE RESPONSE 276 from SMART CARD READER 260 to SMART CARD 262.
  - 7th:** SIGNED CHALLENGE, SIGNED CHALLENGE, & MERCHANT'S INIT MSG 224 from CONSUMER'S COMPUTER 202 to ISSUER GATEWAY 214.
  - 8th:** SIGNED AUTHORIZATION TOKEN 226 from ISSUER GATEWAY 214 to CONSUMER'S COMPUTER 202.
  - 9th:** AUTHORIZATION TOKEN TO MERCHANT 228 from CONSUMER'S COMPUTER 202 to MERCHANT 204.
  - 10th:** CAPTURE TRANSACTION 242 from MERCHANT 204 to ACQUIRER GATEWAY 206.
  - 224':** Message from ISSUING BANK 212 to ISSUER GATEWAY 214.
  - 226':** Message from ISSUING BANK 212 to ACQUIRER GATEWAY 206.
  - 242':** Message from ACQUIRER GATEWAY 206 to ACQUIRING BANK 208.
- Networks:**
  - INTERNET connects ISSUER GATEWAY 214 and ACQUIRER GATEWAY 206.
  - PRIVATE NETWORK connects ISSUING BANK 212 and ACQUIRING BANK 208.

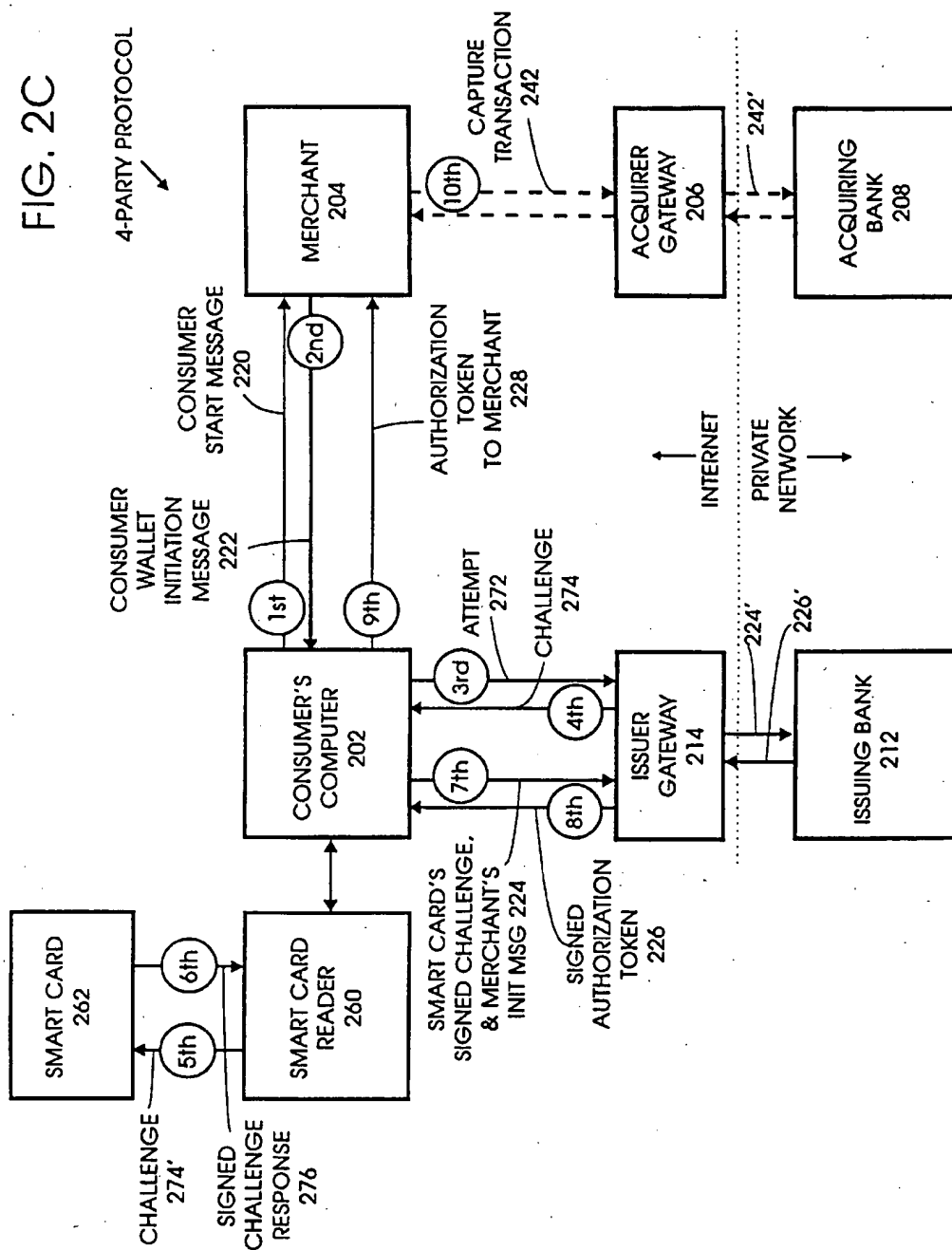


FIG. 3

4-PARTY CREDIT/DEBIT PROTOCOL  
300

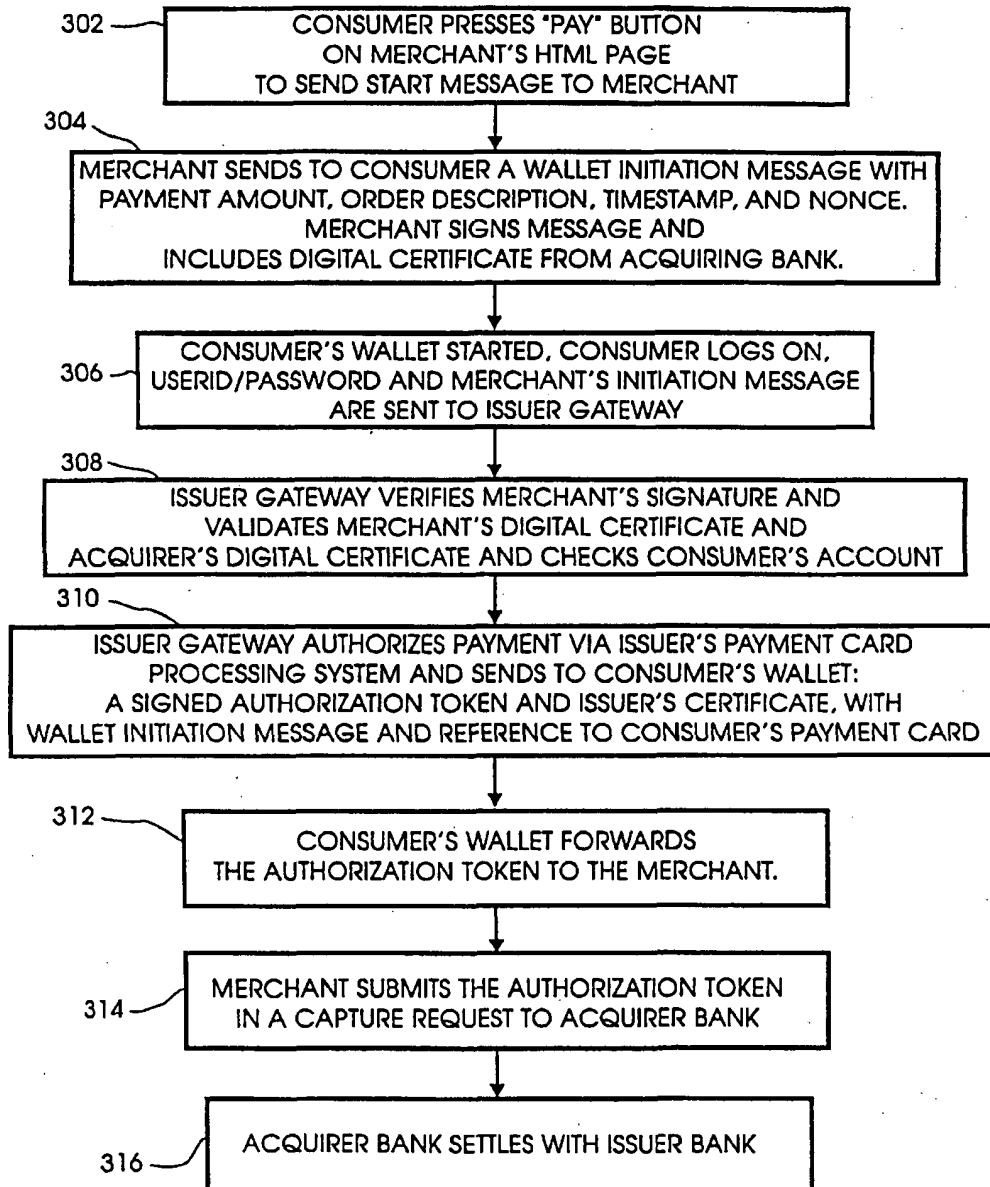


FIG. 4

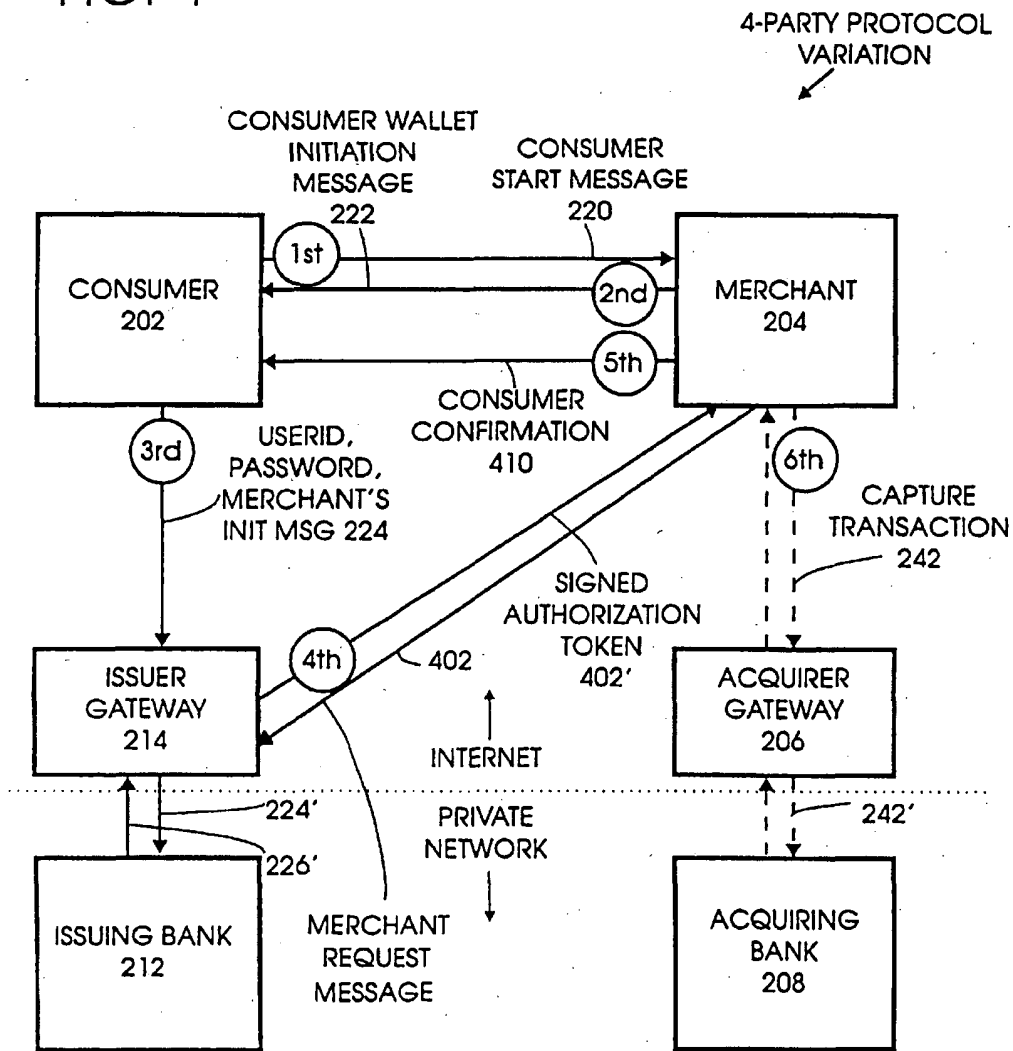


FIG. 5

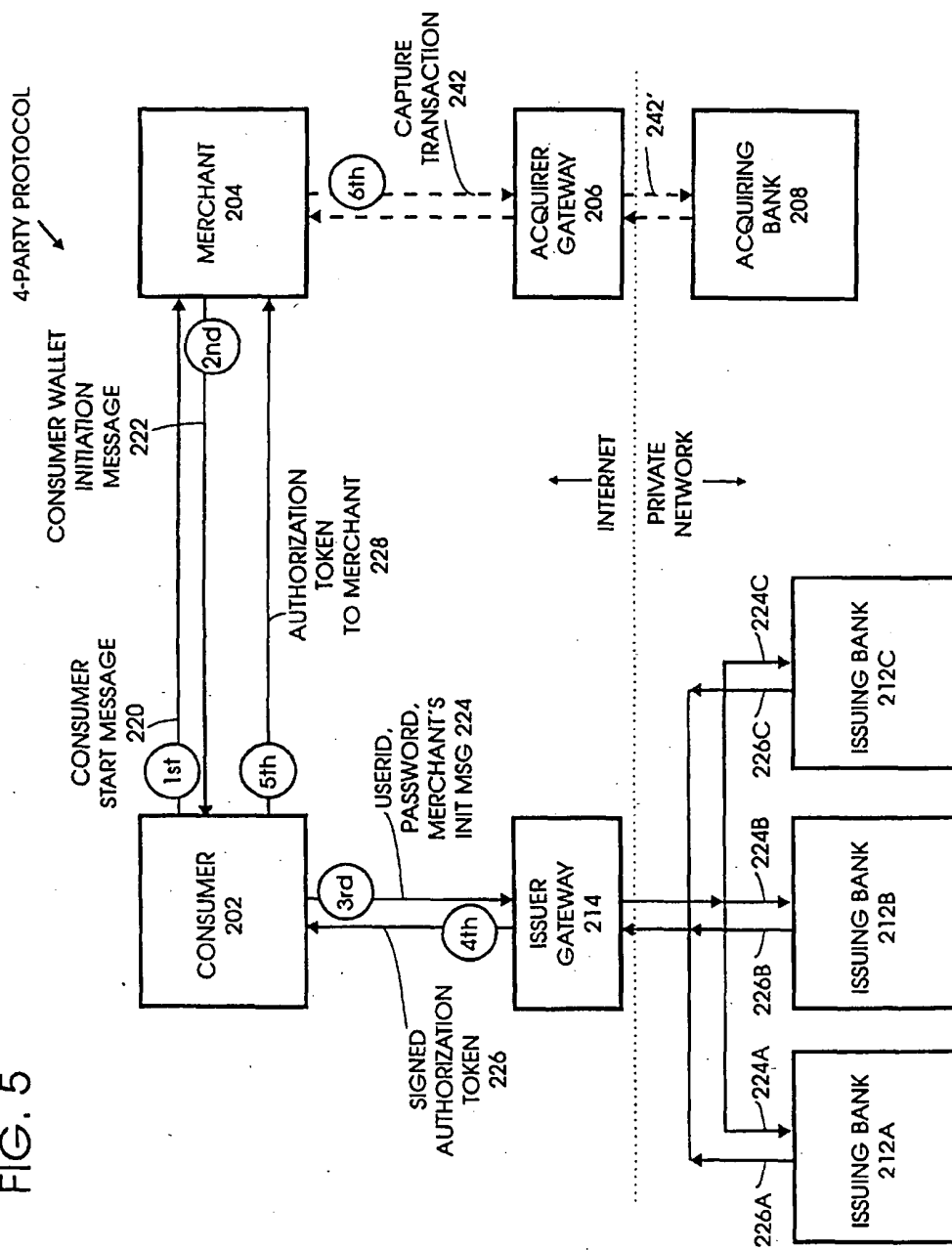


FIG. 6

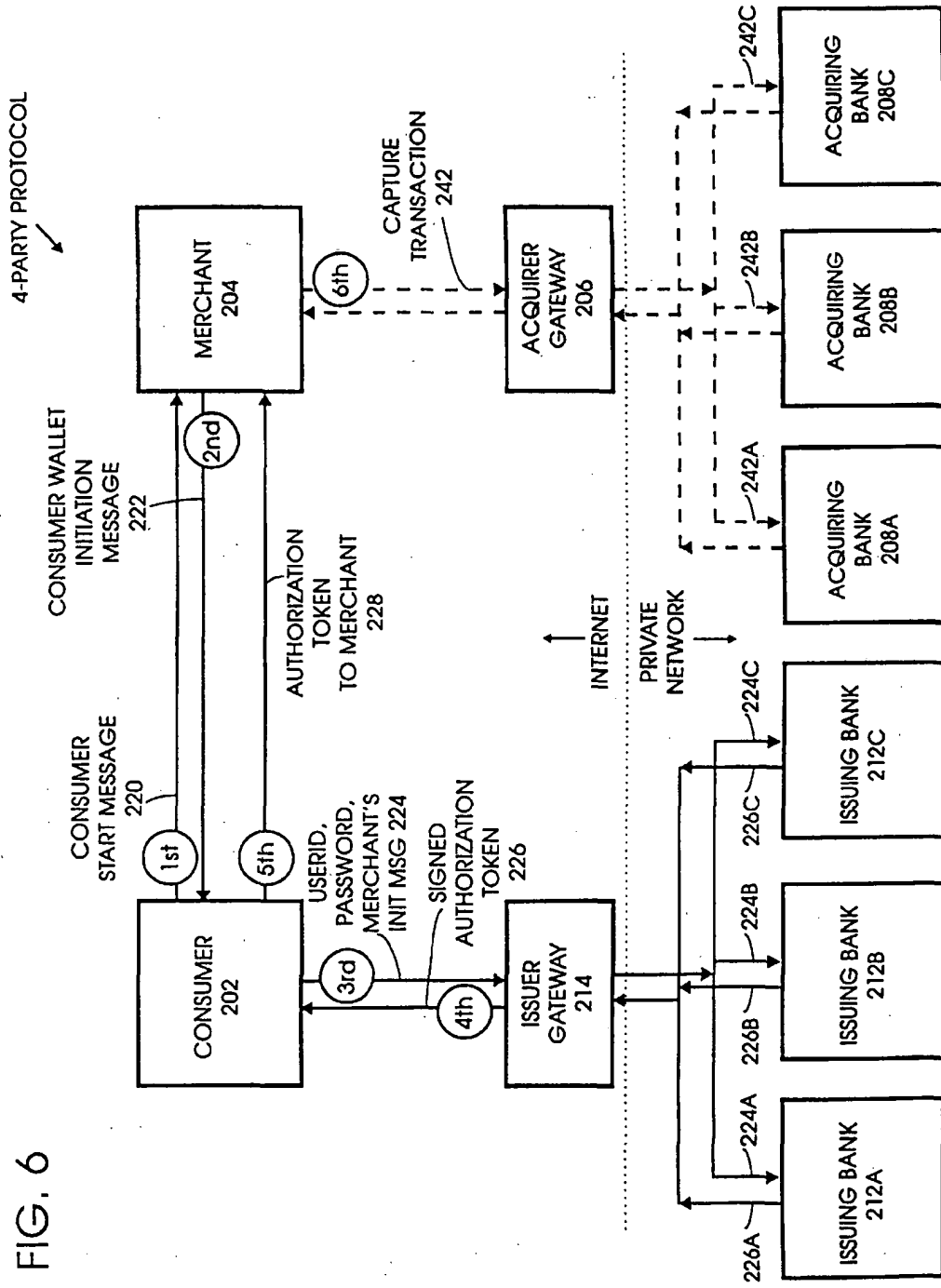




FIG. 7

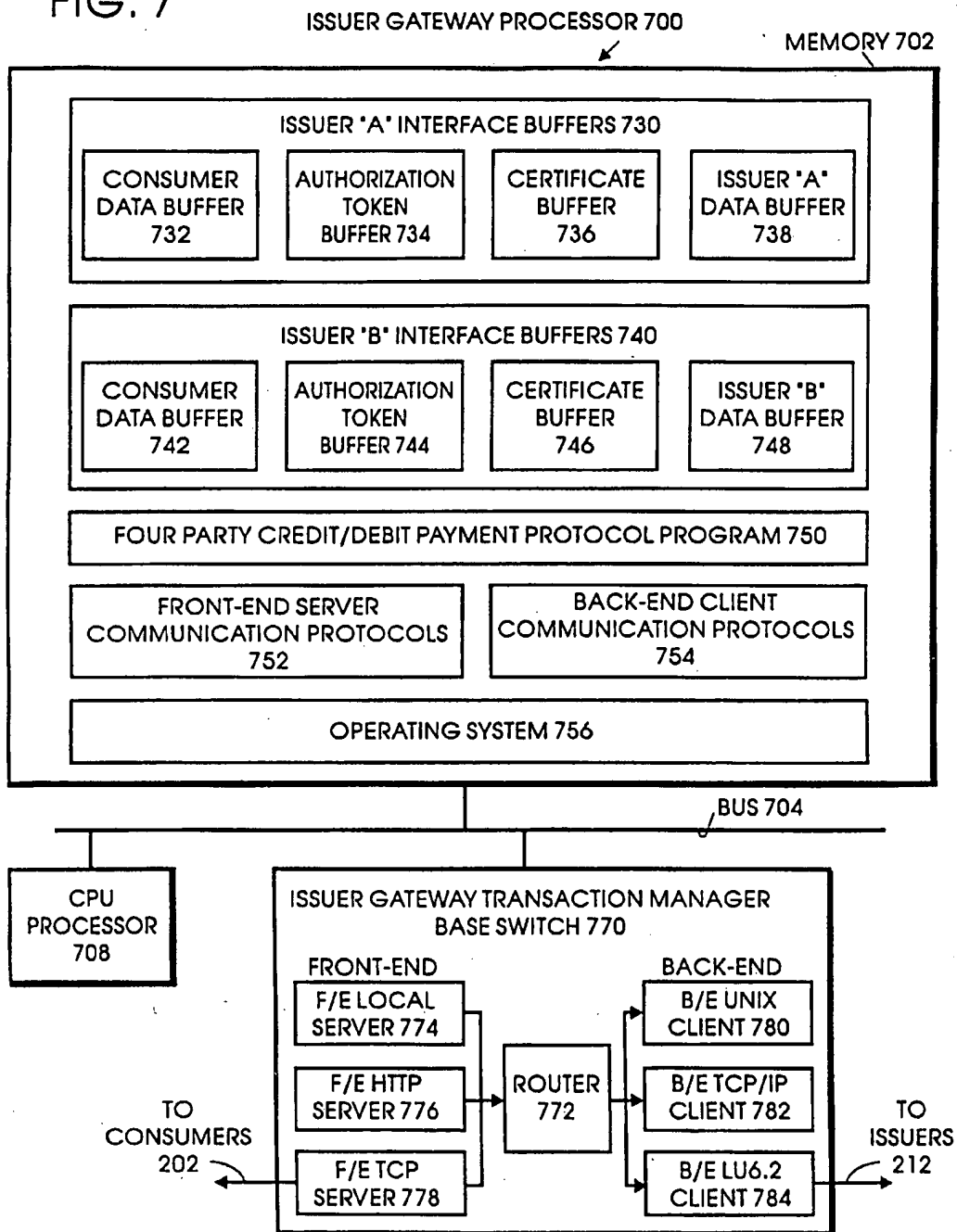


FIG. 8

ISSUER GATEWAY PROCESS

800

